

What is claimed is:

1. A method for preparing a stable, artificially-sweetened, calcium-supplemented beverage concentrate which comprises forming a stabilized solution of one or more calcium salts and one or more edible acids in water and subsequently adding an artificial sweetener to the stabilized solution to form the beverage concentrate.
2. The method of claim 1, wherein the one or more calcium salts are chosen from the group consisting of calcium hydroxide, calcium carbonate, calcium sulfate, calcium chloride, mono-calcium phosphate, di-calcium phosphate, tri-calcium phosphate, calcium saccharin, calcium glycerophosphate, calcium citrate, calcium malate, calcium maleate, calcium tartrate, calcium succinate, calcium gluconate, calcium lactate, calcium fumarate, calcium sorbate, and mixtures thereof.
3. The method of claim 1, wherein the one or more edible acids are chosen from the group consisting of phosphoric acid, citric acid, lactic acid, malic acid, maleic acid, adipic acid, succinic acid, fumaric acid, tartaric acid, gluconic acid, ascorbic acid and mixtures thereof.
4. The method of claim 1, wherein the artificial sweetener is chosen from the group consisting of aspartame, acesulfame potassium, neotame, alitame, sodium saccharin, calcium saccharin, sucralose, sodium cyclamate, calcium cyclamate, neohesperidin, dihydrochalcone, and mixtures thereof.
5. The method of claim 4, wherein the artificial sweetener comprises aspartame.
6. The method of claim 4, wherein the artificial sweetener comprises aspartame and acesulfame potassium.

7. The method of claim 1, wherein the stabilized solution further comprises one or more preservatives dissolved in the solution prior to the addition of the artificial sweetener.
- 5 8. The method of claim 7, wherein the one or more preservatives is chosen from the group consisting of sodium benzoate, calcium benzoate, potassium benzoate, sodium sorbate, calcium sorbate, potassium sorbate, ascorbic acid, SHMP, EDTA, BHA, BHT, TBHQ, dehydroacetic acid, dimethyldicarbonate, ethoxyquin, heptylparaben, and combinations thereof.
- 10 9. The method of claim 1, wherein the stabilized solution further comprises acid-containing flavoring composition dissolved prior to the addition of the artificial sweetener.
- 15 10. The method of claim 9, wherein the acid-containing flavoring composition comprises a cola flavor.
11. The method of claim 9, wherein the acid-containing flavoring composition comprises a combination of cola flavor and lemon flavor.
- 20 12. The method of claim 9, wherein the acid-containing flavoring composition comprises a citrus flavor.
13. A beverage concentrate produced by the method of claim 1.
- 25 14. A full strength beverage produced by dissolving the beverage concentrate of claim 13 with water.
15. The full strength beverage of claim 14 comprising one part beverage  
30 concentrate and five parts water.

16. The full strength beverage of claim 14, wherein the water comprises carbonated water.
17. A method for preparing a stable, artificially-sweetened calcium-  
5 supplemented beverage concentrate which comprises:
- a) preparing a first solution or dispersion of one or more calcium salts and water;
  - b) adding one or more edible acids to the first solution or dispersion to form a second solution wherein the one or more calcium salts and one or more edible  
10 acids are fully dissolved in solution;
  - c) adding an artificial sweetener to the second solution to form a third solution wherein the one or more calcium salts, one or more edible acids and artificial sweetener are fully dissolved in solution; and
  - d) optionally adding additional edible ingredients;
  - 15 thereby forming the beverage concentrate.
18. The method of claim 17, wherein the one or more calcium salts are chosen from the group consisting of calcium hydroxide, calcium carbonate, calcium sulfate, calcium chloride, mono-calcium phosphate, di-calcium phosphate, tri-  
20 calcium phosphate, calcium saccharin, calcium glycerophosphate, calcium citrate, calcium malate, calcium maleate, calcium tartrate, calcium succinate, calcium gluconate, calcium lactate, calcium fumarate, calcium benzoate, calcium sorbate, and mixtures thereof.
19. The method of claim 17, wherein the one or more edible acids are chosen from the group consisting of phosphoric acid, citric acid, lactic acid, malic acid, maleic acid, adipic acid, succinic acid, fumaric acid, tartaric acid, gluconic acid, ascorbic acid, and mixtures thereof.
20. The method of claim 17, wherein the artificial sweetener is chosen from the group consisting of aspartame, acesulfame potassium, neotame, alitame, sodium

saccharin, calcium saccharin, sucralose, sodium cyclamate, calcium cyclamate, neohesperidin, dihydrochalcone, and mixtures thereof.

21. The method of claim 20, wherein the artificial sweetener comprises  
5 aspartame.

22. The method of claim 19, wherein the artificial sweetener comprises  
aspartame and acesulfame potassium.

10 23. The method of claim 17 further comprising the step of dissolving one or  
more preservatives to the second solution such that one or more preservatives, one  
or more calcium salts, and one or more edible acids are fully dissolved in the  
second solution prior to conducting step (c).

15 24. The method of claim 23, wherein the preservative is chosen from the group  
consisting of sodium benzoate, calcium benzoate, potassium benzoate, sodium  
sorbate, calcium sorbate, potassium sorbate, SHMP, EDTA, BHA, BHT, TBHQ,  
dehydroacetic acid, ascorbic acid, dimethyldicarbonate, ethoxyquin, heptylparaben,  
and combinations thereof.

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25. The method of claim 17 further comprising the step of dissolving one or  
more acid-containing flavoring compositions to the second solution such that the  
one or more acid-containing flavoring compositions, one or more calcium salts,  
and one or more edible acids are fully dissolved in the second solution prior to  
25 conducting step (c).

26. The method of claim 25, wherein the one or more acid-containing flavoring  
composition comprises a cola flavor.

30 27. The method of claim 25, wherein the one or more acid-containing flavoring  
composition comprises cola flavor and lemon flavor.

28. The method of claim 25, wherein the one or more acid-containing flavoring composition comprises a citrus flavor.

29. A beverage concentrate produced by the method of claim 17.

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30. A full strength beverage produced by dissolving the beverage concentrate of claim 29 with water.

31. The full strength beverage of claim 30 comprising one part beverage  
10 concentrate and five parts water.

32. The full strength beverage of claim 31, wherein the water is carbonated water.

15 33. A beverage composition comprising calcium, artificial sweetener, and one or more edible acids which is a stable solution and exhibits effective sweetness.

34. The beverage composition of claim 33 further comprising cola flavor.

20 35. The beverage composition of claim 34 further comprising edible ingredients chosen from the group consisting of chemical preservatives, caffeine, caramel, coloring agents or dyes, antifoam, gums, emulsifiers, juices, tea solids, cloud component, mineral and non-mineral nutritional supplements and combinations thereof.

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36. The beverage composition of claim 33 further comprising a fruit flavor.

37. The beverage composition of claim 33 further comprising a tea flavor.

38. A calcium-supplemented beverage concentrate composition comprising as the calcium source calcium chloride and at least two calcium salts chosen from monocalcium phosphate, calcium hydroxide and calcium carbonate.
- 5 39. The calcium-supplemented beverage concentrate of claim 38, wherein the calcium source comprises calcium chloride, calcium hydroxide and monocalcium phosphate.
40. The calcium-supplemented beverage concentrate of claim 38, wherein the  
10 calcium source comprises calcium chloride, calcium hydroxide and calcium carbonate.
41. The calcium-supplemented beverage concentrate of claim 38, wherein the  
15 calcium source comprises calcium chloride, calcium monophosphate and calcium carbonate.
42. The calcium-supplemented beverage concentrate of claim 38, wherein the  
20 calcium source comprises calcium chloride, calcium hydroxide, calcium carbonate and monocalcium phosphate.
43. The calcium-supplemented beverage concentrate of claim 38 further comprising one or more edible acids.
44. The calcium-supplemented beverage concentrate of claim 43, wherein the  
25 one or more edible acids are chosen from the group consisting of phosphoric acid, citric acid, ascorbic acid, adipic acid, lactic acid, malic acid, maleic acid, succinic acid, fumaric acid, tartaric acid, gluconic acid, and mixtures thereof.
45. The calcium-supplemented beverage concentrate of claim 38 further  
30 comprising an artificial sweetener.

46. The calcium-supplemented beverage concentrate of claim 41, wherein the artificial sweetener is chosen from the group consisting of aspartame, acesulfame potassium, neotame, alitame, sodium saccharin, calcium saccharin, sucralose, sodium cyclamate, calcium cyclamate, neosheperidin, dihydrochalcone, and mixtures thereof.

47. The calcium-supplemented beverage concentrate of claim 46, wherein the artificial sweetener comprises aspartame.

48. The calcium-supplemented beverage concentrate of claim 46, wherein the artificial sweetener comprises aspartame and acesulfame potassium.

49. The calcium-supplemented beverage concentrate of claim 38 further comprising one or more preservatives.

50. The calcium-supplemented beverage concentrate claim 49, wherein the one or more preservatives is chosen from the group consisting of sodium benzoate, calcium benzoate, potassium benzoate, sodium sorbate, calcium sorbate, potassium sorbate, ascorbic acid, SHMP, EDTA, BHA, BHT, TBHQ, dehydroacetic acid, dimethyldicarbonate, ethoxyquin, heptylparaben, and combinations thereof.

51. The calcium-supplemented beverage concentrate of claim 38 further comprising one or more flavor compositions.

52. The calcium-supplemented beverage concentrate of claim 51, wherein the flavor composition comprises cola flavor.

53. The calcium-supplemented beverage concentrate of claim 51, wherein the flavor composition comprises cola flavor and lemon flavor.

54. The calcium-supplemented beverage concentrate of claim 51, wherein the flavor composition comprises a fruit flavor.

55. The calcium-supplemented beverage concentrate of claim 51, wherein the  
5 flavor composition comprises a tea flavor.

56. The calcium-supplemented beverage concentrate of claim 38 further  
comprising edible ingredients chosen from the group consisting of caffeine,  
caramel, coloring agents or dyes, antifoam, gums, emulsifiers, juices, tea solids,  
10 cloud component, mineral and non-mineral nutritional supplements and  
combinations thereof.

57. A full strength beverage produced by dissolving the calcium-supplemented  
beverage concentrate of claim 38 with water.

58. The full strength beverage of claim 57 comprising one part calcium-  
supplemented beverage concentrate and five parts water.

59. The full strength beverage of claim 58, wherein the water is carbonated water.  
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60. A method for preparing a stable, artificially-sweetened, calcium-  
supplemented full strength beverage which comprises forming a stabilized solution  
of one or more calcium salts and one or more edible acids in water and  
subsequently adding an artificial sweetener to the stabilized solution to form the  
25 beverage.

61. The method of claim 60, wherein the one or more calcium salts are chosen  
from the group consisting of calcium hydroxide, calcium carbonate, calcium  
sulfate, calcium chloride, mono-calcium phosphate, di-calcium phosphate, tri-  
30 calcium phosphate, calcium saccharin, calcium glycerophosphate, calcium citrate,  
calcium malate, calcium maleate, calcium tartrate, calcium succinate, calcium



gluconate, calcium lactate, calcium fumarate, calcium sorbate, and mixtures thereof.

62. The method of claim 60, wherein the one or more edible acids are chosen  
5 from the group consisting of phosphoric acid, citric acid, lactic acid, malic acid, maleic acid, adipic acid, succinic acid, fumaric acid, tartaric acid, gluconic acid, ascorbic acid and mixtures thereof.

63. The method of claim 60, wherein the artificial sweetener is chosen from the  
10 group consisting of aspartame, acesulfame potassium, neotame, alitame, sodium saccharin, calcium saccharin, sucralose, sodium cyclamate, calcium cyclamate, neoheperidin, dihydrochalcone, and mixtures thereof.

64. The method of claim 60, wherein the stabilized solution further comprises  
15 one or more preservatives dissolved in the solution prior to the addition of the artificial sweetener.

65. The method of claim 64, wherein the one or more preservatives is chosen  
from the group consisting of sodium benzoate, calcium benzoate, potassium  
20 benzoate, sodium sorbate, calcium sorbate, potassium sorbate, ascorbic acid, SHMP, EDTA, BHA, BHT, TBHQ, dehydroacetic acid, dimethyldicarbonate, ethoxyquin, heptylparaben, and combinations thereof.

66. The method of claim 60, wherein the stabilized solution further comprises  
25 acid-containing flavoring composition dissolved prior to the addition of the artificial sweetener.

67. The method of claim 66, wherein the acid-containing flavoring composition  
comprises a cola flavor.

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68. The method of claim 66, wherein the acid-containing flavoring composition comprises a combination of cola flavor and lemon flavor.

69. The method of claim 66, wherein the acid-containing flavoring composition  
5 comprises a citrus flavor.

70. The method of claim 60, further comprising a step of adding an additional ingredient after the step of adding the artificial sweetener.

10 71. The method of claim 70, wherein the additional ingredient is selected from the group consisting of caffeine, caramel, coloring agents or dyes, antifoam, gums, emulsifiers, juices, tea solids, cloud component, mineral and non-mineral nutritional supplements and combinations thereof.

15 72. A full strength beverage produced by the method of claim 60.

73. A method for preparing a stable, artificially-sweetened calcium-supplemented full strength beverage which comprises:

a) preparing a first solution or dispersion of one or more calcium salts and  
20 water;

b) adding one or more edible acids to the first solution or dispersion to form a second solution wherein the one or more calcium salts and one or more edible acids are fully dissolved in solution;

c) adding an artificial sweetener to the second solution to form a third  
25 solution wherein the one or more calcium salts, one or more edible acids and artificial sweetener are fully dissolved in solution; and

d) optionally adding additional edible ingredients;  
thereby forming the full strength beverage.

30 74. The method of claim 73, wherein the one or more calcium salts are chosen from the group consisting of calcium hydroxide, calcium carbonate, calcium

sulfate, calcium chloride, mono-calcium phosphate, di-calcium phosphate, tri-calcium phosphate, calcium saccharin, calcium glycerophosphate, calcium citrate, calcium malate, calcium maleate, calcium tartrate, calcium succinate, calcium gluconate, calcium lactate, calcium fumarate, calcium benzoate, calcium sorbate, and mixtures thereof.

75. The method of claim 73, wherein the one or more edible acids are chosen from the group consisting of phosphoric acid, citric acid, lactic acid, malic acid, maleic acid, adipic acid, succinic acid, fumaric acid, tartaric acid, gluconic acid, ascorbic acid, and mixtures thereof.

76. The method of claim 73, wherein the artificial sweetener is chosen from the group consisting of aspartame, acesulfame potassium, neotame, alitame, sodium saccharin, calcium saccharin, sucralose, sodium cyclamate, calcium cyclamate, neohesperidin, dihydrochalcone, and mixtures thereof.

77. The method of claim 73 further comprising the step of dissolving one or more preservatives to the second solution such that one or more preservatives, one or more calcium salts, and one or more edible acids are fully dissolved in the second solution prior to conducting step (c).

78. The method of claim 77, wherein the preservative is chosen from the group consisting of sodium benzoate, calcium benzoate, potassium benzoate, sodium sorbate, calcium sorbate, potassium sorbate, SHMP, EDTA, BHA, BHT, TBHQ, dehydroacetic acid, ascorbic acid, dimethyldicarbonate, ethoxyquin, heptylparaben, and combinations thereof.

79. The method of claim 73 further comprising the step of dissolving one or more acid-containing flavoring compositions to the second solution such that the one or more acid-containing flavoring compositions, one or more calcium salts,

and one or more edible acids are fully dissolved in the second solution prior to conducting step (c).

80. The method of claim 79, wherein the one or more acid-containing flavoring  
5 composition comprises a cola flavor.

81. The method of claim 79, wherein the one or more acid-containing flavoring  
composition comprises cola flavor and lemon flavor.

10 82. The method of claim 79, wherein the one or more acid-containing flavoring  
composition comprises a citrus flavor.

83. The method of claim 73 further comprising a step of adding an additional  
ingredient after step (d).

15 84. The method of claim 83, wherein the additional ingredient is selected from  
the group consisting of caffeine, caramel, coloring agents or dyes, antifoam, gums,  
emulsifiers, juices, tea solids, cloud component, mineral and non-mineral  
nutritional supplements and combinations thereof.

20 85. A full strength beverage produced by the method of claim 72.

86. A calcium-supplemented beverage composition comprising as the calcium  
source calcium chloride and at least two calcium salts chosen from monocalcium  
25 phosphate, calcium hydroxide and calcium carbonate.

87. The calcium-supplemented beverage of claim 86, wherein the calcium  
source comprises calcium chloride, calcium hydroxide and monocalcium  
phosphate.

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88. The calcium-supplemented beverage of claim 86, wherein the calcium source comprises calcium chloride, calcium hydroxide and calcium carbonate.

5 89. The calcium-supplemented beverage of claim 86, wherein the calcium source comprises calcium chloride, calcium monophosphate and calcium carbonate.

90. The calcium-supplemented beverage of claim 86, wherein the calcium source comprises calcium chloride, calcium hydroxide, calcium carbonate and monocalcium phosphate.  
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91. The calcium-supplemented beverage of claim 86 further comprising one or more edible acids.

15 92. The calcium-supplemented beverage of claim 91, wherein the one or more edible acids are chosen from the group consisting of phosphoric acid, citric acid, ascorbic acid, adipic acid, lactic acid, malic acid, maleic acid, succinic acid, fumaric acid, tartaric acid, gluconic acid, and mixtures thereof.

20 93. The calcium-supplemented beverage of claim 86 further comprising an artificial sweetener.

94. The calcium-supplemented beverage of claim 93, wherein the artificial sweetener is chosen from the group consisting of aspartame, acesulfame potassium, neotame, alitame, sodium saccharin, calcium saccharin, sucralose, sodium cyclamate, calcium cyclamate, neosheperidin, dihydrochalcone, and mixtures thereof.  
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95. The calcium-supplemented beverage of claim 86 further comprising one or more preservatives.  
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96. The calcium-supplemented beverage of claim 95, wherein the one or more preservatives is chosen from the group consisting of sodium benzoate, calcium benzoate, potassium benzoate, sodium sorbate, calcium sorbate, potassium sorbate, ascorbic acid, SHMP, EDTA, BHA, BHT, TBHQ, dehydroacetic acid,
- 5 dimethyldicarbonate, ethoxyquin, heptylparaben, and combinations thereof.
97. The calcium-supplemented beverage of claim 86 further comprising one or more flavor compositions.
- 10 98. The calcium-supplemented beverage of claim 97, wherein the flavor composition comprises cola flavor.
99. The calcium-supplemented beverage of claim 97, wherein the flavor composition comprises cola flavor and lemon flavor.
- 15 100. The calcium-supplemented beverage of claim 97, wherein the flavor composition comprises a fruit flavor.
101. The calcium-supplemented beverage of claim 97, wherein the flavor
- 20 composition comprises a tea flavor.
102. The calcium-supplemented beverage of claim 86 further comprising edible ingredients chosen from the group consisting of caffeine, caramel, coloring agents or dyes, antifoam, gums, emulsifiers, juices, tea solids, cloud component, mineral
- 25 and non-mineral nutritional supplements and combinations thereof.